CLAIMS

1. A device for transmitting a movement, comprising:
   - at least one moveable member (2) which is coupled to at least one parallel kinematics transmission structure (3) each providing three translational degrees of freedom;
   - at least one rotative actuator (30) which is coupled to the parallel transmission structure (3) over a control arm (10) such that any translational movement is transmitted into a rotational movement, or vice versa;
   - wherein the rotative actuator (30) is arranged such that its axis (31) is substantially perpendicular to a rotation axis (11) of the control arm (10).

2. The device according to claim 1, wherein the moveable member (2) is coupled to three parallel kinematics transmission structures (3) in a delta type arrangement, each being coupled to a respective rotative actuator (30), wherein the rotative actuators (30) are arranged such that their axis are substantially parallel to each other.

3. The device according to claim 2, wherein the rotative actuators (30) are arranged on a common base member (1) of the device in a close relationship to each other.

4. The device according to one of the preceding claims, further comprising a cable member (51) to transmit the movements between the rotative actuator (30) and the control arm (10).

5. The device according to claim 4, wherein the cable member (51) is coupled to a shaft of the rotative actuator (30) at one end and to the respective control arm (10) at the other.

6. The device according to one of the preceding claims, wherein at least some of the articulations (23) of the parallel kinematics transmission structure (3) are flexible hinge articulations.

7. The device according to claim 6, wherein at least two of the base member, control arm, linking bar and flexible hinge articulations are made from one piece.

8. The device according to one of the preceding claims, wherein the control arm (10) is provided with a restoring element (80) such as to provide a restoring force against the force exerted by the rotative actuator (30).

9. The device according to one of the claims 4-8, wherein the shaft of the rotative actuator (30) is adapted to enable secure coiling and uncoiling of the cable member (51).

10. The device according to one of the claims 4-9, wherein the cable member (51) is coupled at a fixation point (60) of the control arm (10) such as to allow the end of the cable to rotate with respect to the control arm (10).

11. The device according to one of the preceding claims, further comprising at least one redirection member (70) for each control arm (10), wherein each redirection member (70) is fixedly mounted on a base member of the device and located between the control arm (10) and the shaft of the respective rotative actuator (30).

12. The device according to claim 11, when referred to one of claims 4-10, wherein the redirection member (70) is located in a distance from the shaft of the respective rotative actuator (30) such as to allow an appropriate incidence of the cable member (51) on the shaft of the actuator (30).

13. The device according to one of the claims 11-12, further comprising a torsional spring (81) arranged to bias the shaft of the rotative actuator (30).

14. The device according to claim 13, wherein the torsional force of the spring (81) is such that the prestressing action of the restoring element is at least partly compensated.

15. A haptic device for providing a user with force-feedback information, comprising a device for transmitting a movement according to one of the preceding claims.

16. The haptic device according to claim 15, further comprising a sensor for measuring the aperture angle of each control arm (10) and a processor for calculating the position of the moveable member (2) based on the results of the measurement.

17. The haptic device according to claims 15 or 16, further comprising a wrist module arranged in series with the parallel transmission structure (3) and adapted to provide at least one rotational degrees of freedom.

18. The haptic device according to claim 17, wherein the wrist module is adapted to provide a tactile feedback.

19. The haptic device according to one of the claims 15-18, further comprising control keys, control wheels,

force grippers or other elements used for a human computer interface.

20. The haptic device according to one of the claims 15-19, further comprising a force sensor located underneath the wrist module.

21. A manipulator for providing movements of at least three translatinal degrees of freedom to a manipulation member (96), comprising a device for transmitting a movement according to one of the claims 1-14.

22. A measuring system for providing at least three translatinal degrees of freedom to a sensor element (99), comprising a device for transmitting a movement according to one of the claims 1-14.